



November 22, 2007

EMAIL

Ms. Amy M. Bennett
Standards Coordinator
Bureau of Water
South Carolina Department of Health
and Environmental Control
2600 Bull Street
Columbia, SC 29201

SUBJECT: THE PROPOSED AMENDMENTS OF SOUTH CAROLINA
REGULATION 61-68, WATER CLASSIFICATION AND STANDARDS -
COMMENTS

Dear Ms. Bennett:

The South Carolina Chamber of Commerce Environmental Technical Committee (Chamber) represents over two thousand companies having facilities in South Carolina. The Chamber appreciates the opportunity to submit comments on the Proposed Amendments of South Carolina Regulation 61-68, Water Classifications and Standards published in the October 26, 2007 State Register. The Chamber is interested in these proposed changes to the regulations because of the potential impact on businesses and industry within South Carolina. The Chamber would like to share our concerns and comments for South Carolina Department of Health and Environmental Control's (SCDHEC) consideration. Although some of the comments presented in this letter have been discussed with SCDHEC during the triennial review stakeholder meetings, the Chamber feels that there is merit in our comments and should be consider again by SCDHEC during this final comment period. Please see the attached comments.

Thank you for the opportunity to comment and for your consideration of these comments on the proposed amendments of SC R.61-68. If you have any questions, please feel free to call me at (803) 952-8318.

Sincerely,

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ADOPTION OF EPA WATER QUALITY CRITERIA

During previous correspondence, the South Carolina Chamber of Commerce (the Chamber) and other stakeholders requested that the Department review any new or revised EPA criteria to determine their applicability to South Carolina rather than simply adopting them. This review should encompass all the national recommended water quality criteria for the protection of human health posted in the Federal Register on December 31, 2003. As demonstrated by the Department's modification of the arsenic criteria, there are many variables and assumptions that the EPA uses to calculate recommended water quality criteria, and many of those factors may not be applicable to South Carolina or are overly conservative. As shown below, the Chamber has objection to the direct adoption of the thallium standard, and requests that the Department perform a similar analysis of the other federal criteria prior to incorporation into state regulation.

Revision of the proposed South Carolina water quality standard for thallium

SCDHEC is proposing to adopt the recommended values of 0.24 ppb (W/O) and 0.47 ppb (Org. Only) which were posted in the Federal Register on December 31, 2003. With regard to the human health-based water quality standards for thallium in other EPA Region 4 states, most are either the same as those currently in effect in South Carolina (W/O – 1.7 ppb and Org. Only – 6.3 ppb) or do not exist. Georgia's standards, for example, do not include a W/O thallium standard, while North Carolina's and Mississippi's standards contain neither a W/O standard nor an Org. Only standard for thallium. Based on the requirements of other Region 4 states, the Department should consider whether or not revised thallium standards are necessary.

After conducting a thorough literature search and investigating the derivation of the proposed standards, the Chamber has concluded that the application of these criteria to South Carolina waters is not consistent with the conditions used to derive them. Several factors are utilized in the development of water quality criteria, and their derivation is based on conservative estimates of the risk to human health. These risk factors include the Reference Dose (RfD), the Relative Source Contribution (RSC), the Fish Ingestion Rate (FIR), the Bioconcentration Factor (BCF), and others. Prior to adopting any new criterion, SCDHEC should review each of these factors to ensure that they are appropriate for South Carolina and are not overly conservative. Several of the values used for these factors are overly conservative and one factor that is definitely not appropriate for South Carolina freshwaters is the BCF.

The BCF used to derive the proposed standards of 0.24 ppb (W/O) and 0.47 ppb (Org. Only) is a value of 116 liters/kilogram (L/kg). As detailed in the document titled, "Ambient Water Quality Criteria for Thallium" (EPA 440/5-80-074) and dated October 1980, this value was derived using three species (Atlantic salmon, softshell clam, and blue mussel) with BCF's of 130, 18, and 12 respectively. A BCF of 34 was mentioned for bluegill (which are resident in South Carolina), but this species was not used in the 116 BCF derivation calculation. Of the three species used, only the softshell clam is present in South Carolina. Therefore, rather than use a weighted average (based on the associated ingestion rates) of 116, a BCF of 18 appears to be more appropriate for South Carolina. Making this one change, for example, would result in an Org. Only standard of 3.02 ppb, and if only the softshell clam is used, possibly a lower ingestion rate is appropriate. Further review of each factor used to derive the proposed standards for their applicability in South Carolina is warranted.

Summary

In summary, SCDHEC should not adopt any federally recommended standard without a detailed review of its derivation and applicability to South Carolina surface waters. As recently documented with regard to the human health-based criteria for arsenic, the Department should not adopt generic federal standards without adequate technical review for determining applicability as to whether or not the revised standard would result in a meaningful improvement in human health or the environment. Without this technical review and human health/environmental impact assessment, the Department might adopt overly conservative standards that result in unwarranted economic impacts, placing South Carolina business and industry at a competitive disadvantage

compared to other neighboring states. Noting also that the SC drinking water standard for thallium is 2 ppb, the Chamber requests that SCDHEC review the need for a W/O standard for thallium as well as the derivation of the Org. Only standard. In addition, with regard all of the proposed criteria, the Chamber requests that the Department document the rationale within R.61-68 for their inclusion as South Carolina water quality standards.

DEFINITION OF EPHEMERAL STREAM

The Chamber requests that the definition of ephemeral stream be refined to enable better identification of ephemeral streams through the use of biological indicators. SCDHEC should use scientifically defensible biological data for the development of the indicators.

DESIGNATED USES AND WATER QUALITY STANDARDS FOR EPHEMERAL STREAMS

The water quality standards that currently exist were not derived with ephemeral streams in mind and should not be applied to them. In their 2002, "Draft Strategy for Water Quality Standards and Criteria" EPA stated they would provide "guidance on adopting and implementing water quality standards for intermittent, ephemeral and effluent dependent waters" in 2004. More recently, EPA stated that they intend to provide written guidance after they complete a series of public meetings (Open Public Meeting on Designated Uses and Use Attainability Analysis, Atlanta, September 2005). To date they have not put forth that promised guidance. Although EPA has not completed their guidance, the Chamber requests that SCDHEC develop scientifically-based designated uses and water quality standards for ephemeral streams and include them within R.61-68. Until these uses and criteria are included in the regulation, the Chamber requests that language be added to the regulation or that a policy be implemented to require that individual permits issued by SCDHEC for discharges into ephemeral streams shall include only monitor and report requirements for all but conventional pollutants.

SOURCE WATER PROTECTION

The Chamber supports SCDHEC's position that advocates the removal of the language in Section C.10.a that prohibited mixing zones in state approved source water protection.

During the Stakeholder meetings there a great deal of discuss concerning source water protection and the implementation of that protection as it relates to NPDES permitting. The Chamber looks forward to a continuing open dialogue with SCDHEC on this topic.

RESTRICTION OF INSTREAM DILUTION

SC Regulation 61-9, *Water Pollution Control Permits*, contains a requirement that the Chamber believes should be addressed through R.61-68 and the associated permitting procedures more clearly defined. Many rivers in South Carolina are listed as impaired water bodies for the consumption of fish tissue due to methylmercury, even though the instream mercury concentration is not higher than the most restrictive stream standard. Whether the impairment is due to mercury, iron, or another parameter, the Chamber does not agree, as mentioned in permit rationales, that section 122.44(d)(1)(ii) of R.61-9 is applicable to restrict the use of dilution flow when evaluating the reasonable potential for the discharge to result in an exceedance of the stream standards. With regard to establishing limitations, standards, and other permit conditions, that part of R.61-9 states,

(d) Water quality standards and State requirements: Any requirements in addition to or more stringent than promulgated effluent limitations guidelines or standards under sections 301, 304, 306, 307, and 318, and 405 of CWA necessary to:

(1) Achieve water quality standards established under section 303 of the CWA, including State narrative criteria for water quality.

(ii) When determining whether a discharge causes, has the reasonable potential to cause, or contributes to an in-stream excursion above a narrative or numeric criteria within a State water quality standard, the permitting authority shall use procedures which account for existing controls on point and non-point sources of pollution, the variability of the pollutant or pollutant parameter in the effluent, the sensitivity of the species to toxicity testing (when evaluating whole effluent toxicity), and where appropriate, the dilution of the effluent in the receiving water.

Due to the cost associated with compliance with unnecessarily stringent NPDES permit limitations, the Chamber recommends that Sections C.4.a(2) and C.4.b(2) be modified as shown to clarify that the application of dilution flow should only be restricted when required by an associated TMDL. Since the language in R.61-9 does not specifically restrict dilution flow when deriving water quality-based permit limitations, the Chamber believes that no modification of that regulation is necessary.

C.4(a)(2) Except for impaired water bodies addressed within TMDLs, the Department shall consider conditions that are comparable to or more stringent than 7Q10 where appropriate to protect classified and existing uses, such as below dams and in tidal situations. Only those situations where the use of 7Q10 flows are determined to be impracticable, inappropriate, or insufficiently protective of aquatic life uses shall be considered as a situation in which the Department may consider other flow conditions.

C.4(b)(2) Except for impaired water bodies addressed within TMDLs, the Department shall consider conditions that are comparable to or more stringent than annual average flow, 7Q10, or 30Q5 (if provided by the applicant) where appropriate to protect the classified and existing uses, such as below dams and in tidal situations. Only those situations where the use of annual average flow, or 7Q10, or 30Q5 (if provided by the applicant) are determined to be impracticable, inappropriate, or insufficiently protective of human health uses shall be considered as a situation in which the Department may consider other flow conditions.

OTHER COMMENTS

The Chamber is supportive of SCDHEC's position on several existing water quality criteria:

- 1) Change of the arsenic standard to use the Maximum Contaminant Level as the interim value for the protection of human health until such time as more definitive scientific research is evaluated.
- 2) Removal of the iron and manganese criteria because of issues with background concentrations of the minerals
- 3) The addition of the Biotic Ligand Model for use in developing copper criteria